# Course Material
# Autodesk Fusion

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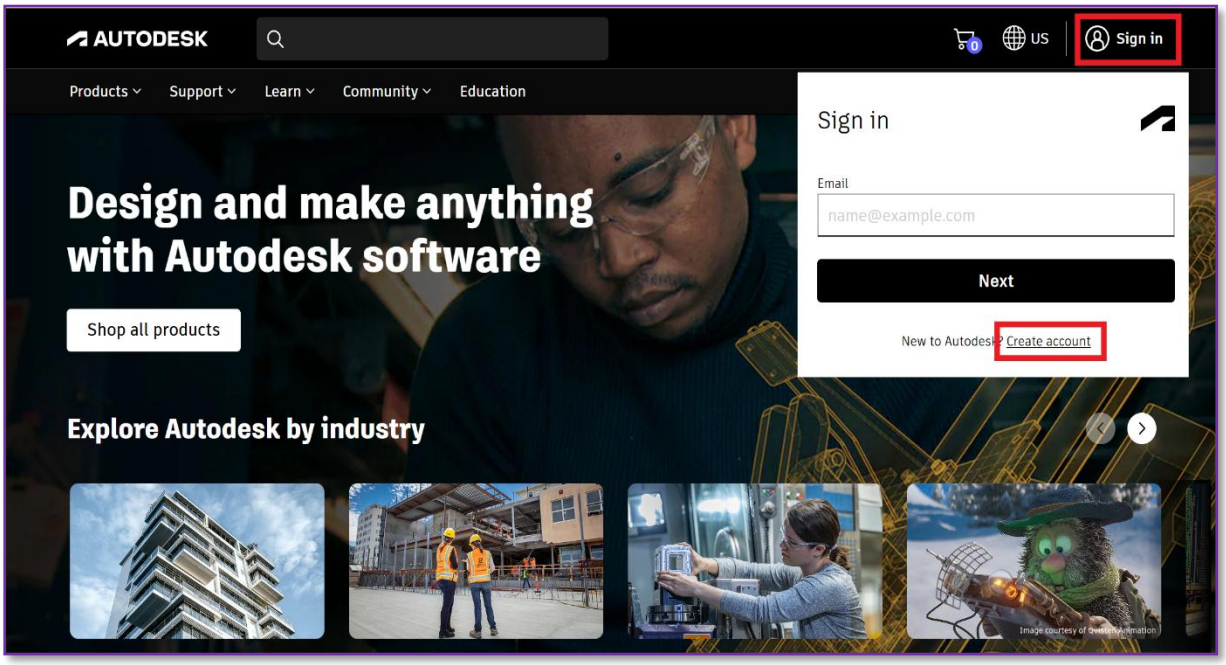
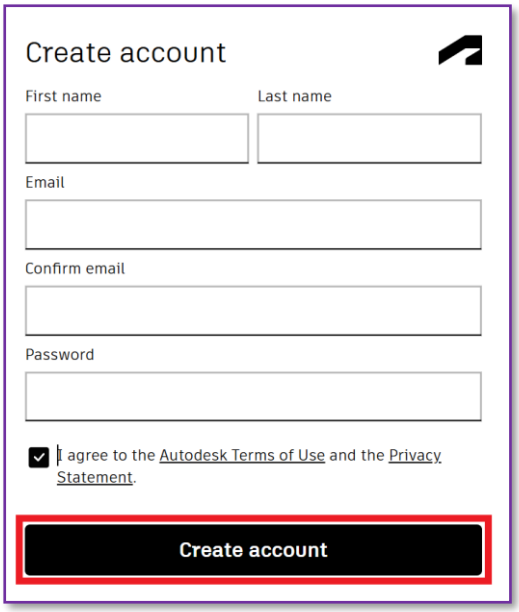
## Installation

**Sign Up/Log In:**

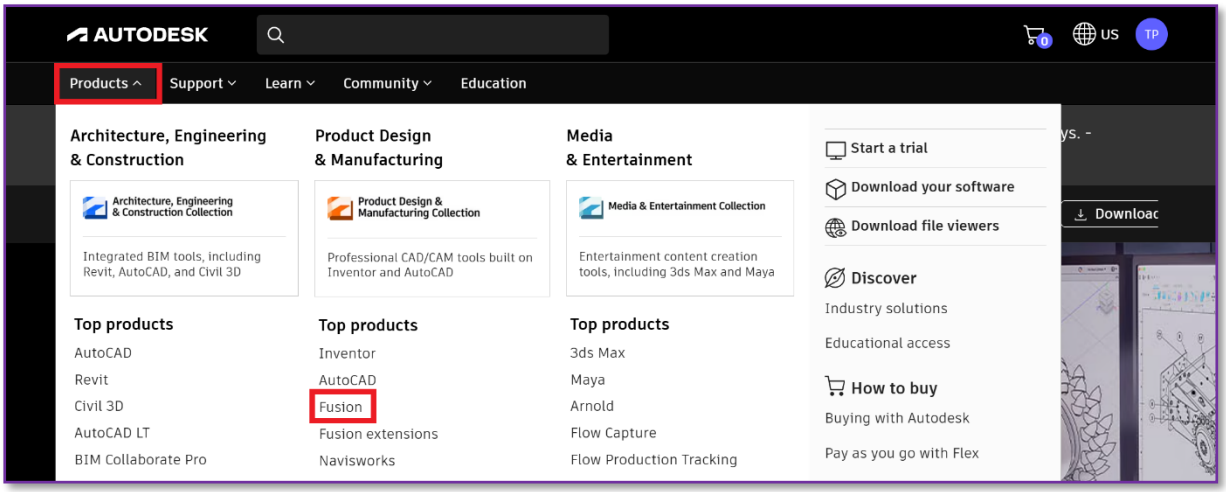
1. Go to https://www.autodesk.com/
2. Click on **"Sign in"**, and on the next page, click on **"Create an account"** to **Sign up**.

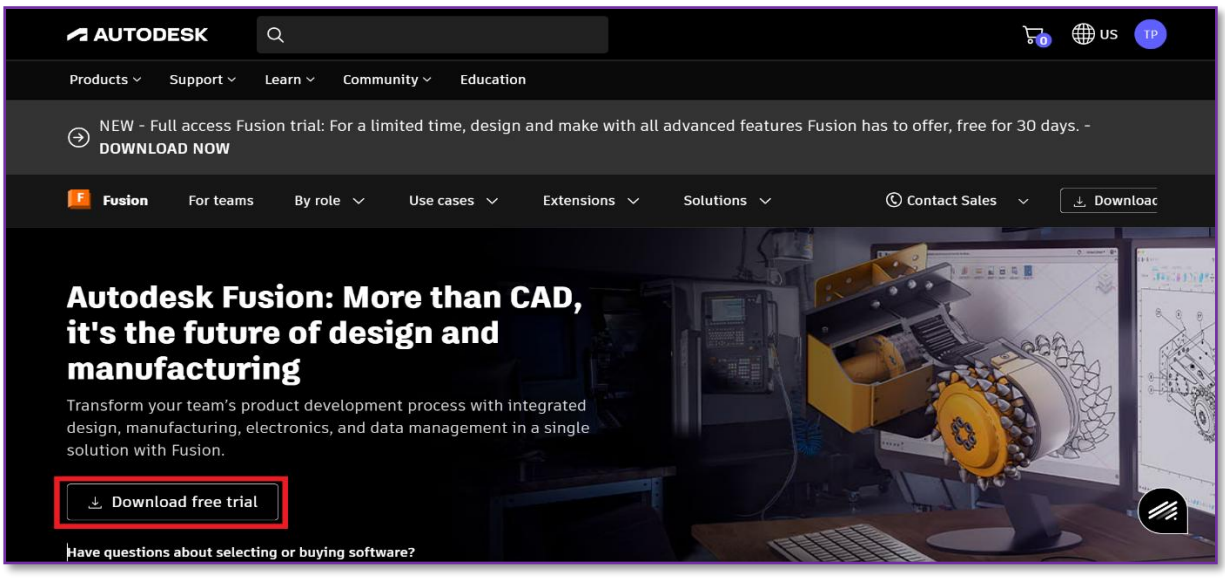



3. Enter your details and click on **"Create account"**.

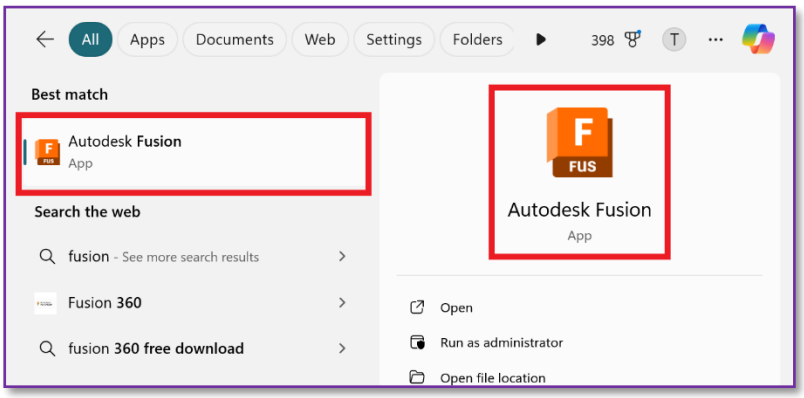



4. After **"Sign in"**, click on **"Products"** and then on **"Fusion"** to navigate to the Autodesk Fusion product home page. Click on **"Download free trial"** and install the Fusion software on your PC.



5. Launch the **"Autodesk Fusion"** application after installation.

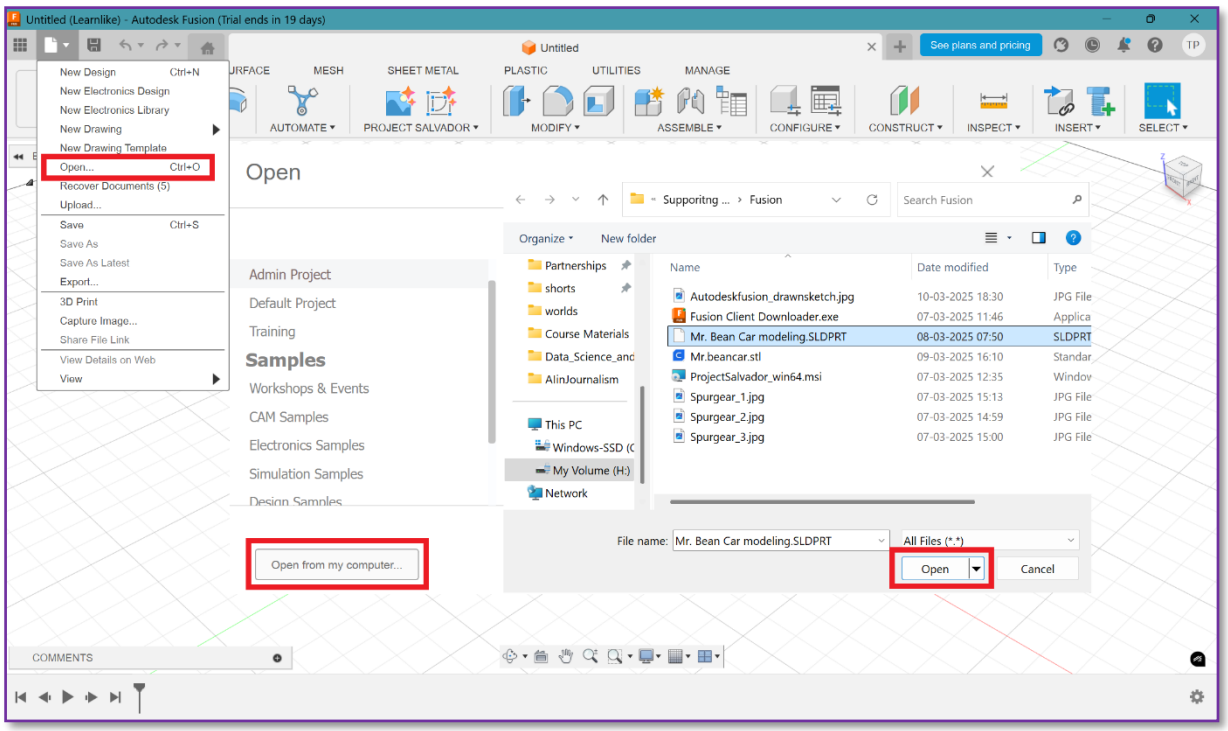


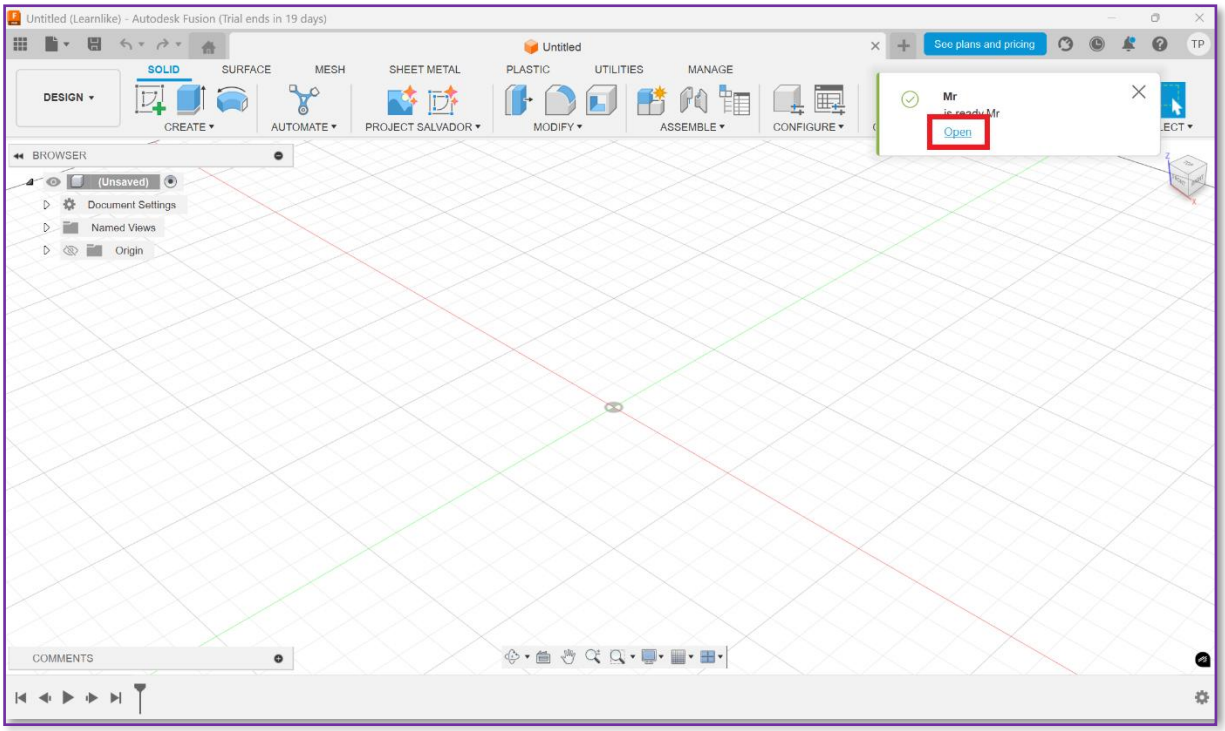

## Basic Navigation Controls

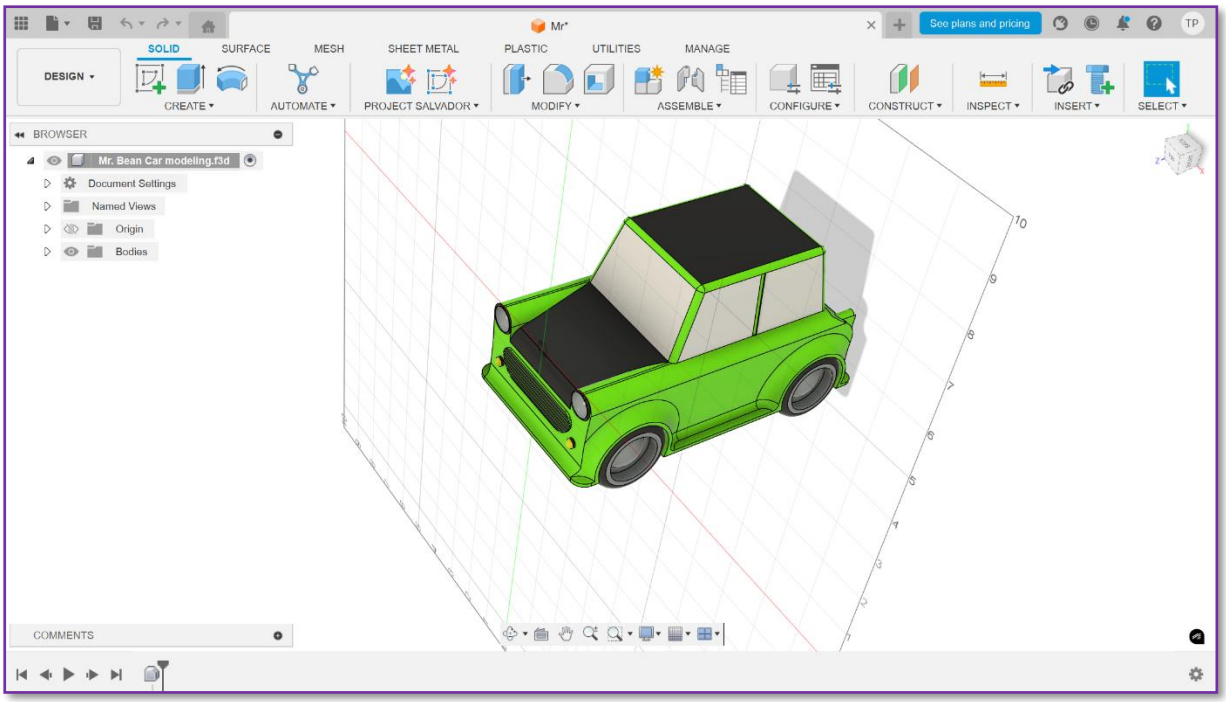
- **Zoom** → Use the **mouse scroll** to zoom in and out.
- **Free Rotate** → Hold **Middle mouse click + Shift** to freely rotate the view.
- **Pan** → Hold **Middle mouse click + Ctrl** to pan across the workspace.

## Automated Modeling

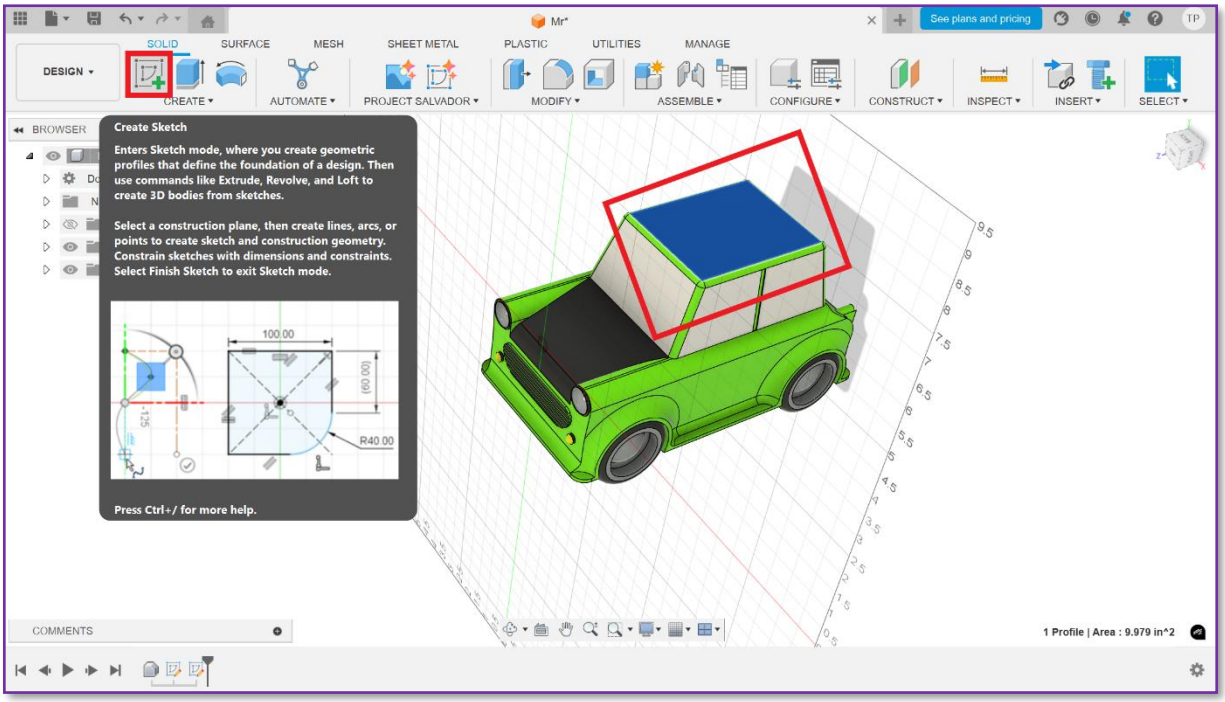
1. Download the **"Mr. Bean Car modeling.SLDPRT"** file from the shared **Google Drive** link to your local PC.
https://drive.google.com/file/d/1SIB5AFmgenGnHkIQfiA9s2zNiYcc310a/view?usp=drive_link
2. Go to **"Open"** → **"Open from my computer"**, select the downloaded file, and click **"Open"**. Once the file is imported, a pop-up will appear. Click **"Open"** to add the part into **Fusion**.






3. Choose the top surface of the car and click on **"Create Sketch"** to draw your sketch. Draw a **rectangle** to match the car width and click **"FINISH SKETCH"** to complete it. **Extrude** the sketch to a minimum depth of **0.05 inch** and click **"OK"** to finalize the extrusion.


Mr*
See plans and pricing
SOLID
SURFACE
MESH
SHEET METAL
PLASTIC
UTILITIES
MANAGE
DESIGN
CREATE
AUTOMATE
PROJECT SALVADOR
MODIFY
ASSEMBLE
CONFIGURE
CONSTRUCT
INSPECT
INSERT
SELECT
BROWSER
Create Sketch
Enters Sketch mode, where you create geometric profiles that define the foundation of a design. Then use commands like Extrude, Revolve, and Loft to create 3D bodies from sketches.
Select a construction plane, then create lines, arcs, or points to create sketch and construction geometry. Constrain sketches with dimensions and constraints. Select Finish Sketch to exit Sketch mode.
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Press Ctrl+/ for more help.
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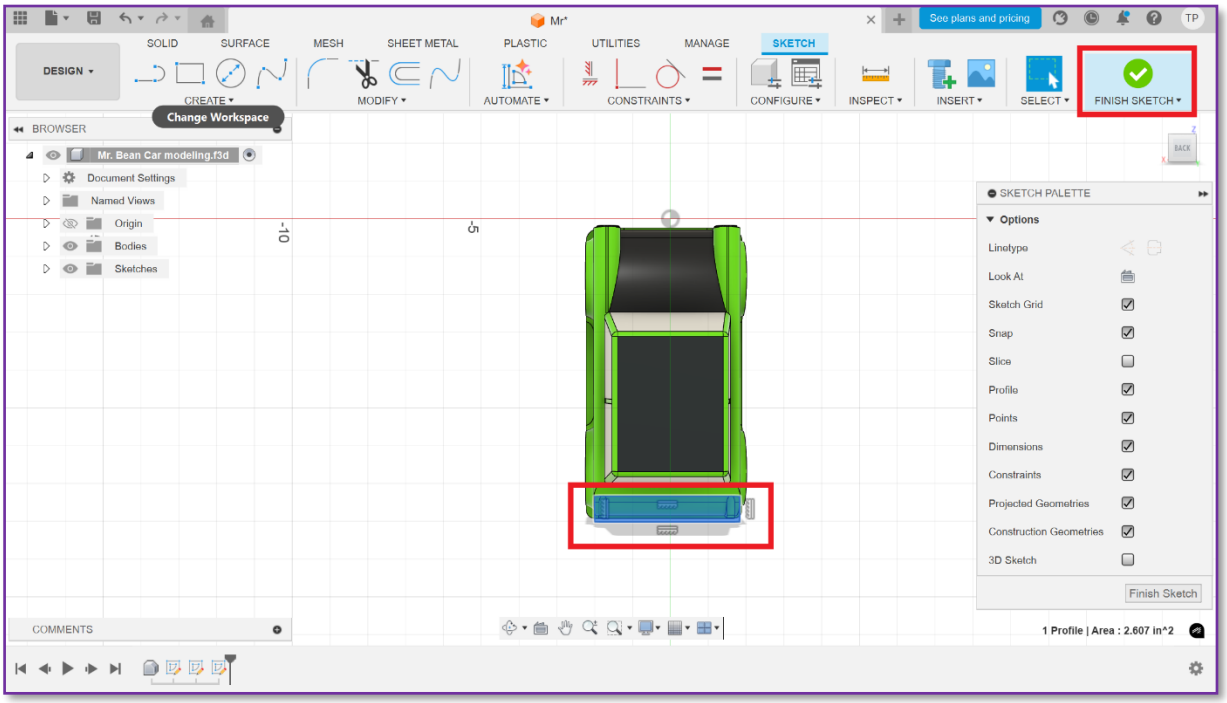
Mr*
See plans and pricing
SOLID
SURFACE
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UTILITIES
MANAGE
SKETCH
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CONSTRAINTS
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INSERT
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FINISH SKETCH
Change Workspace
BROWSER
Mr. Bean Car modeling.f3d
Document Settings
Named Views
Origin
Bodies
Sketches
SKETCH PALETTE
Options
Linetype
Look At
Sketch Grid
Snap
Slice
Profile
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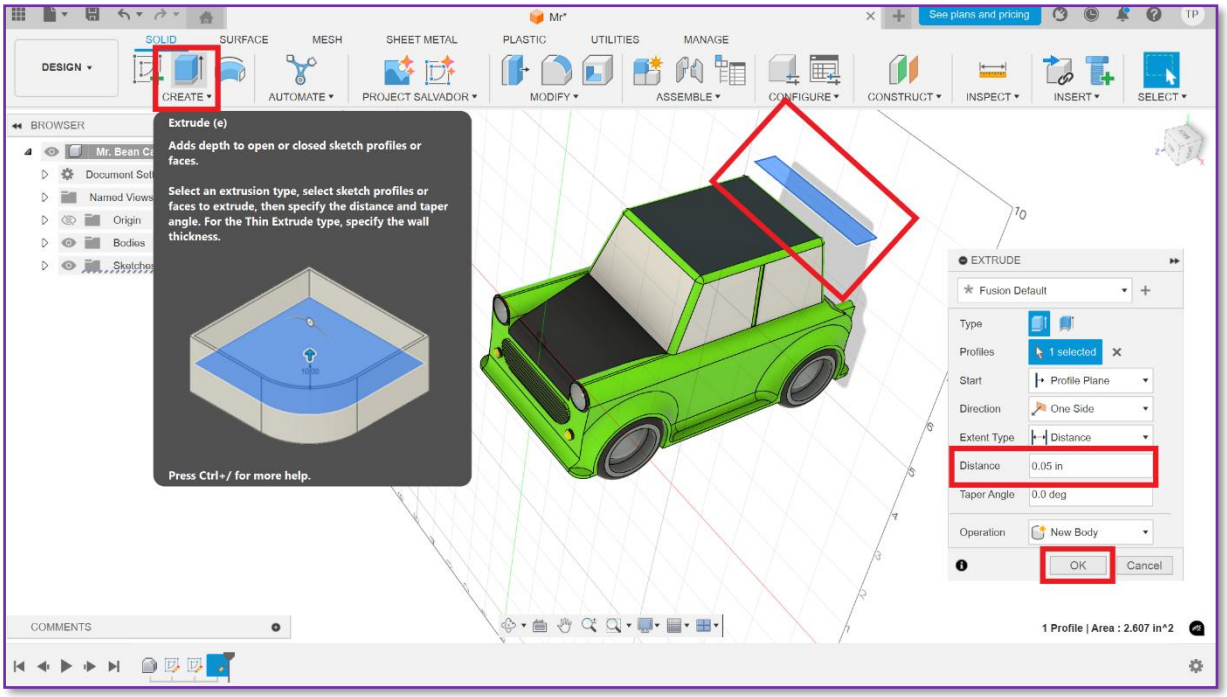
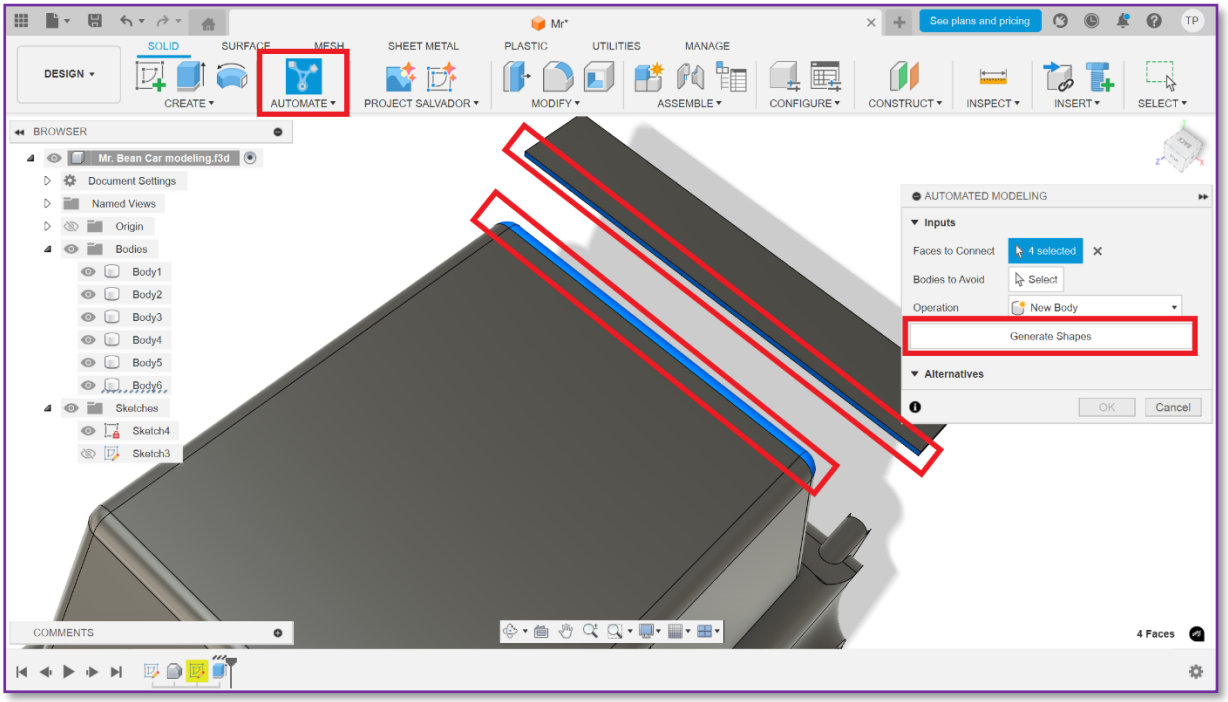
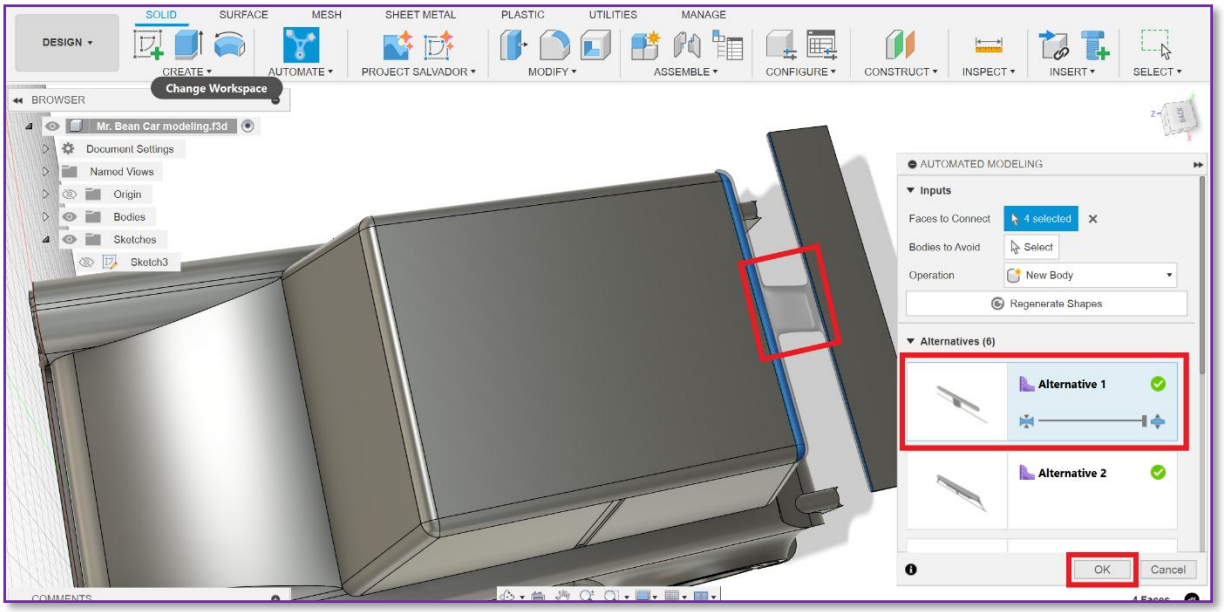
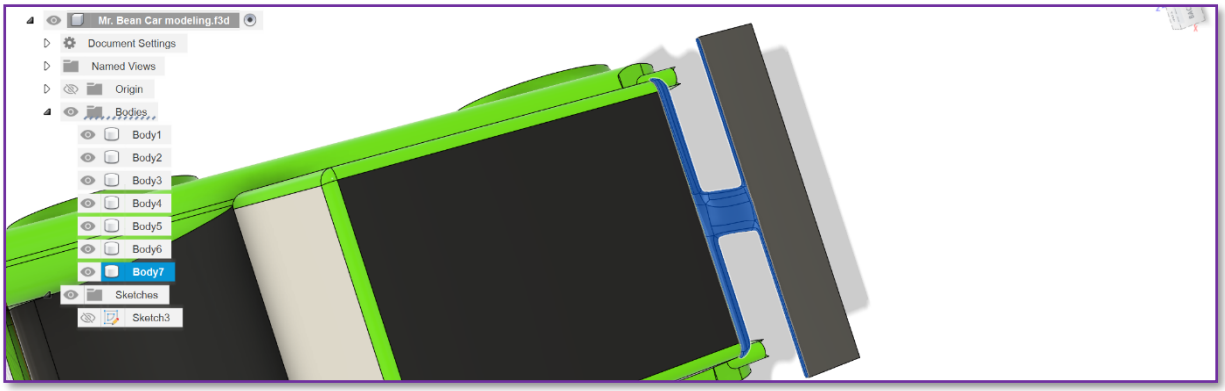
Dimensions
Constraints
Projected Geometries
Construction Geometries
3D Sketch
Finish Sketch
COMMENTS
1 Profile | Area : 2.607 in^2



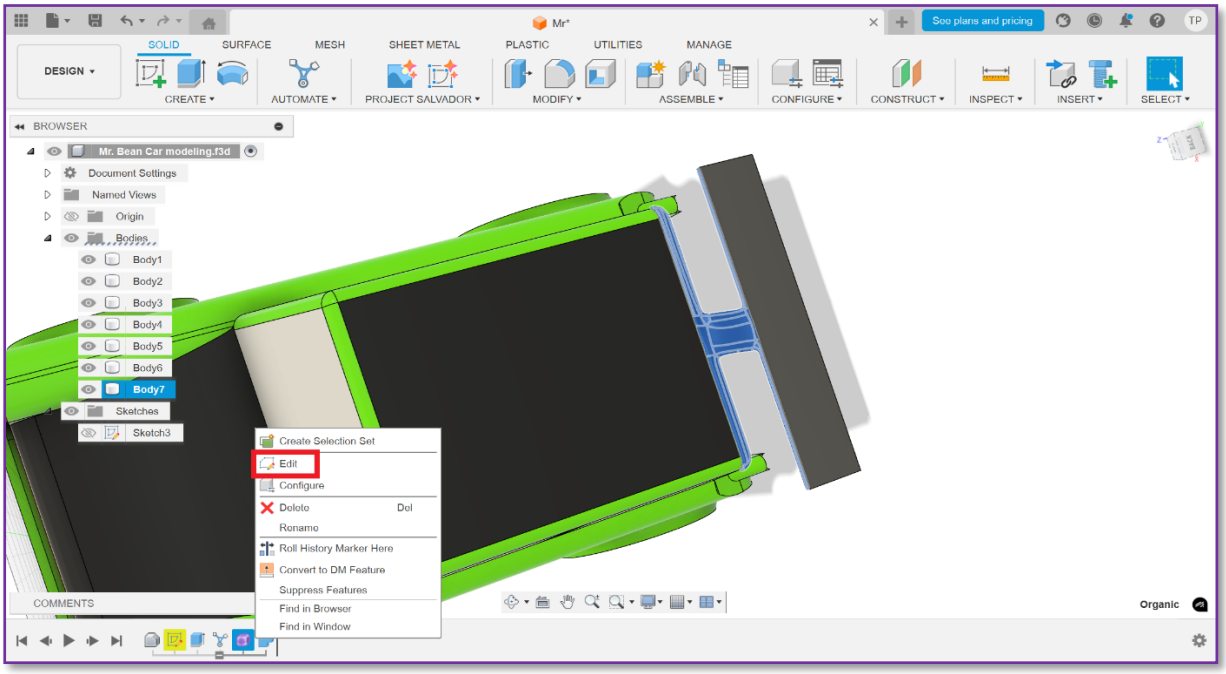

4. Choose all the surfaces to connect and click on **"Automated Modeling → Generate Shapes"**. A few instances will be auto-generated. Select the preferred design, adjust the **volume** of the modelled shape as needed, and click **"OK"** to add the body to the model.

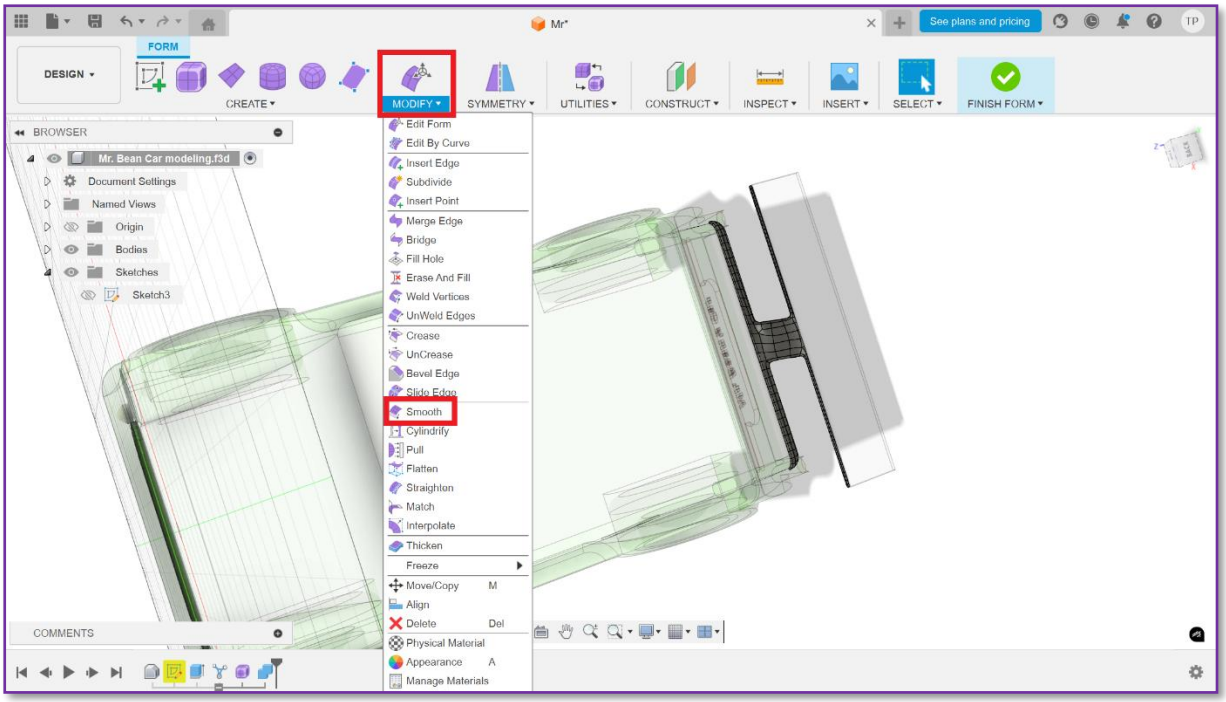




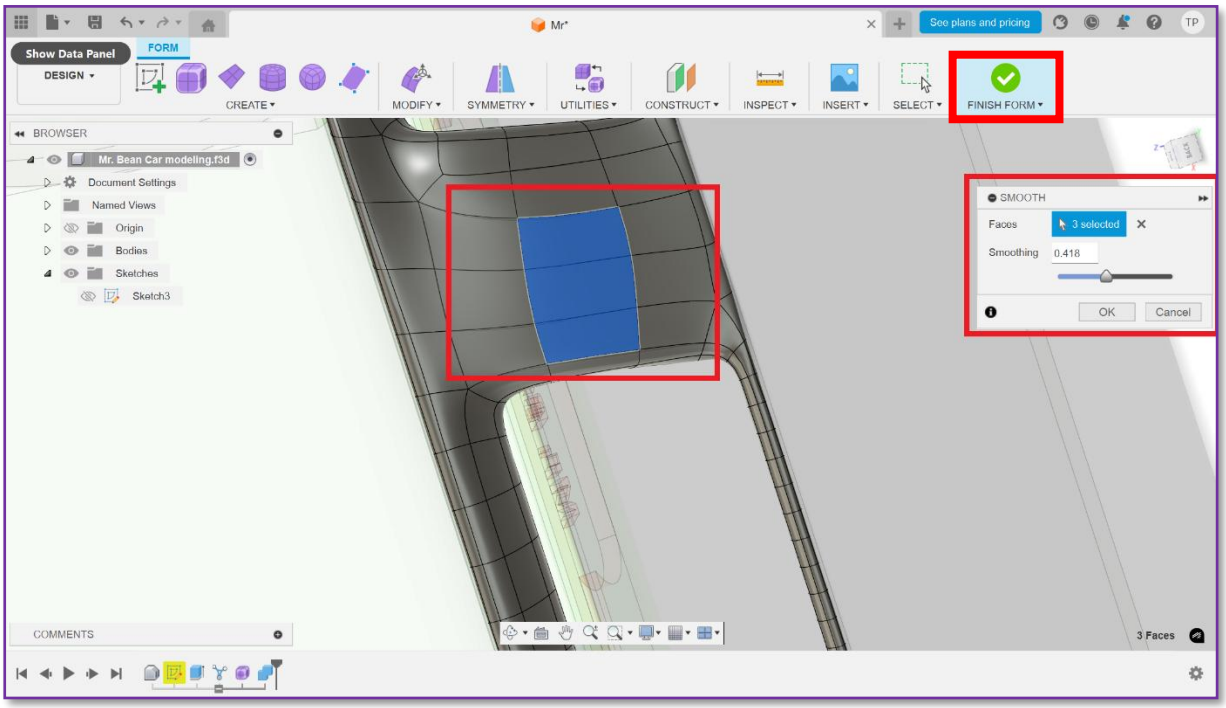



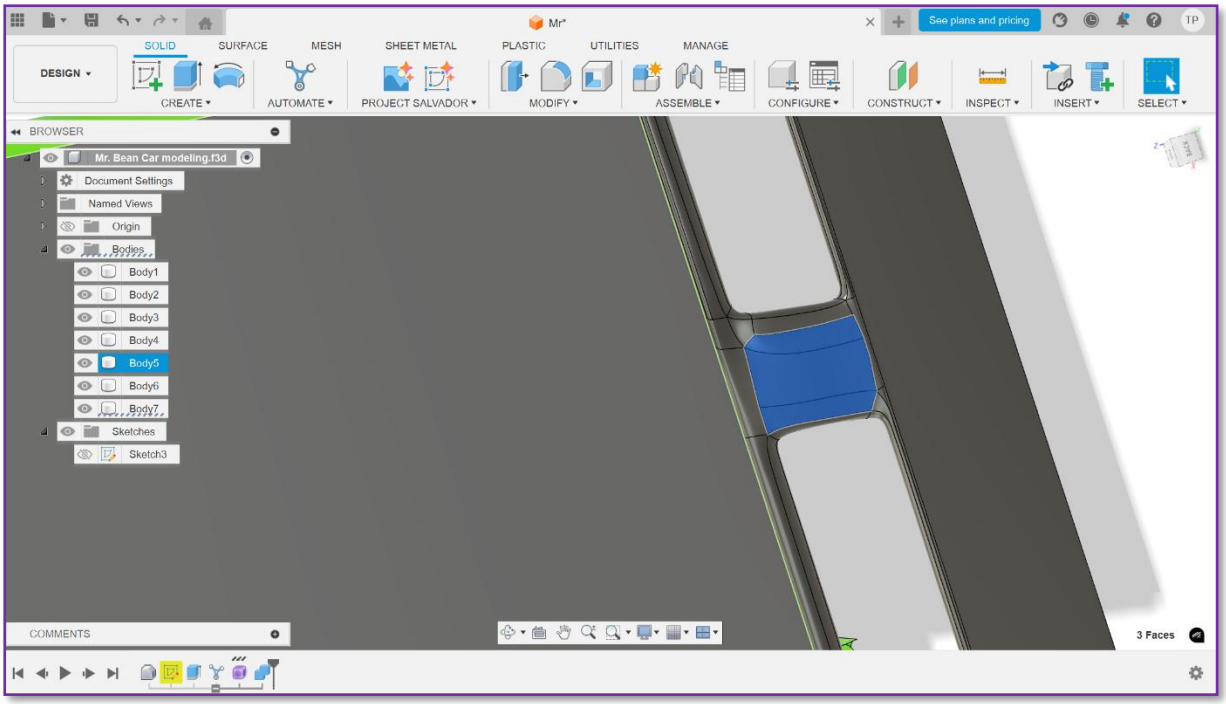

5. Right-click on the new body created and select **"Edit"** to modify its parameters. Example: Choose **"MODIFY → Smooth"** to adjust the curvature and make it smoother.





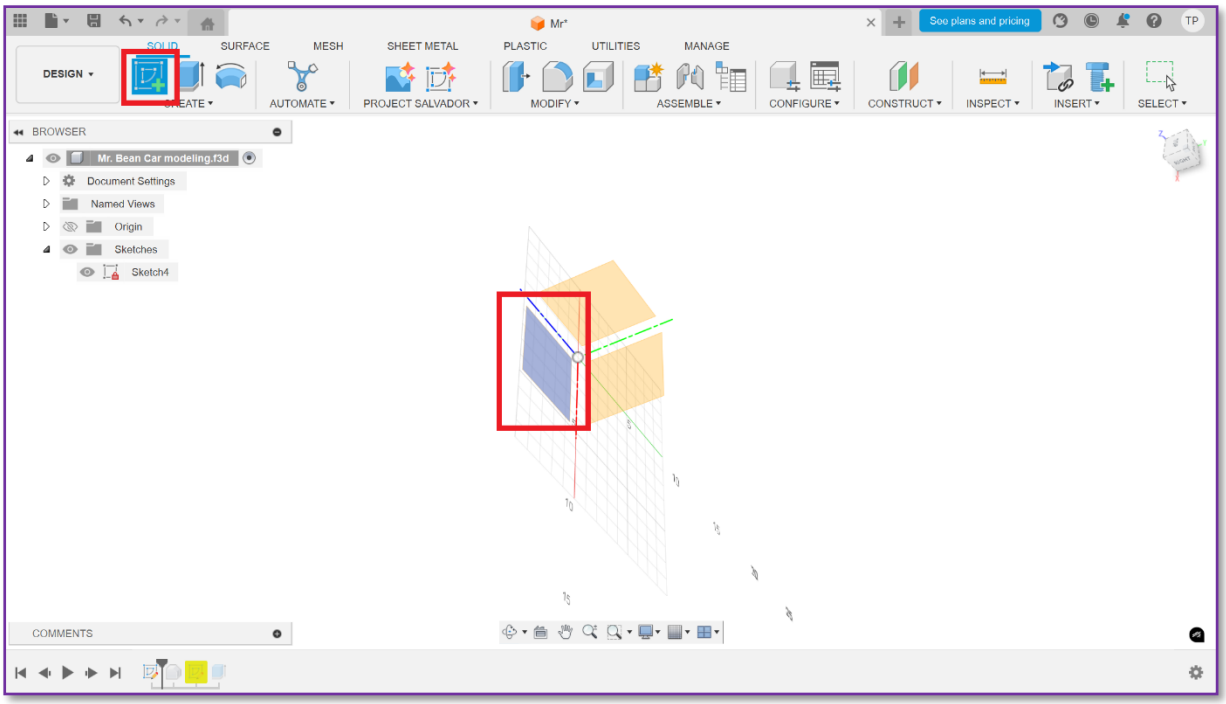

6. Select the faces to smoothen, choose the **smoothing value**, and click **"OK"**. Finally, click **"FINISH FORM"** to apply the modifications to the faces.



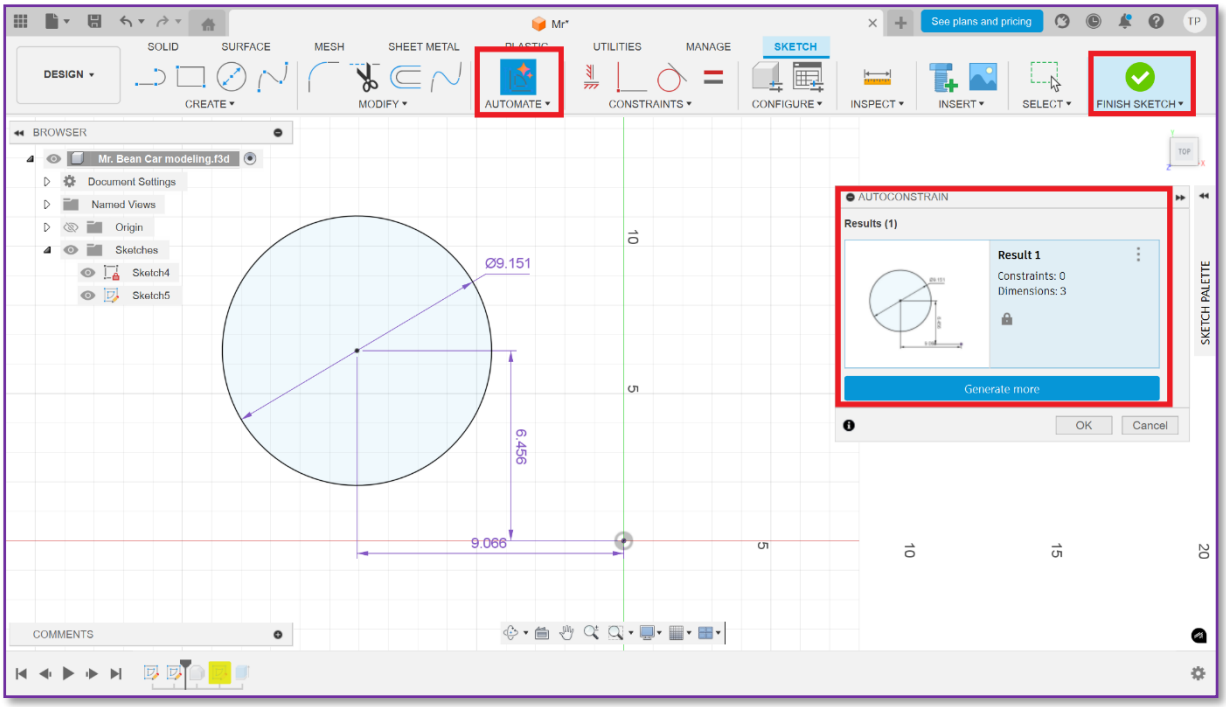



## AutoConstrain

1. Click on **"Create Sketch"** and choose a **plane** to draw the sketch.

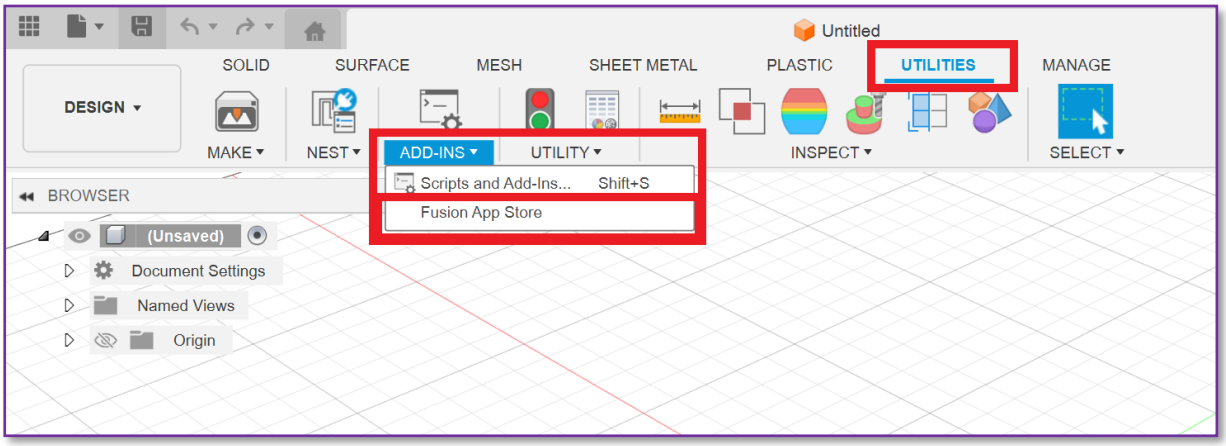



2. Draw any shape and click on **"AutoConstrain"** to automate the constraints. You can choose and apply the constraints of your choice, or click **"Generate more"** for additional constraints. Click on **“FINISH SKETCH”** to apply the changes.

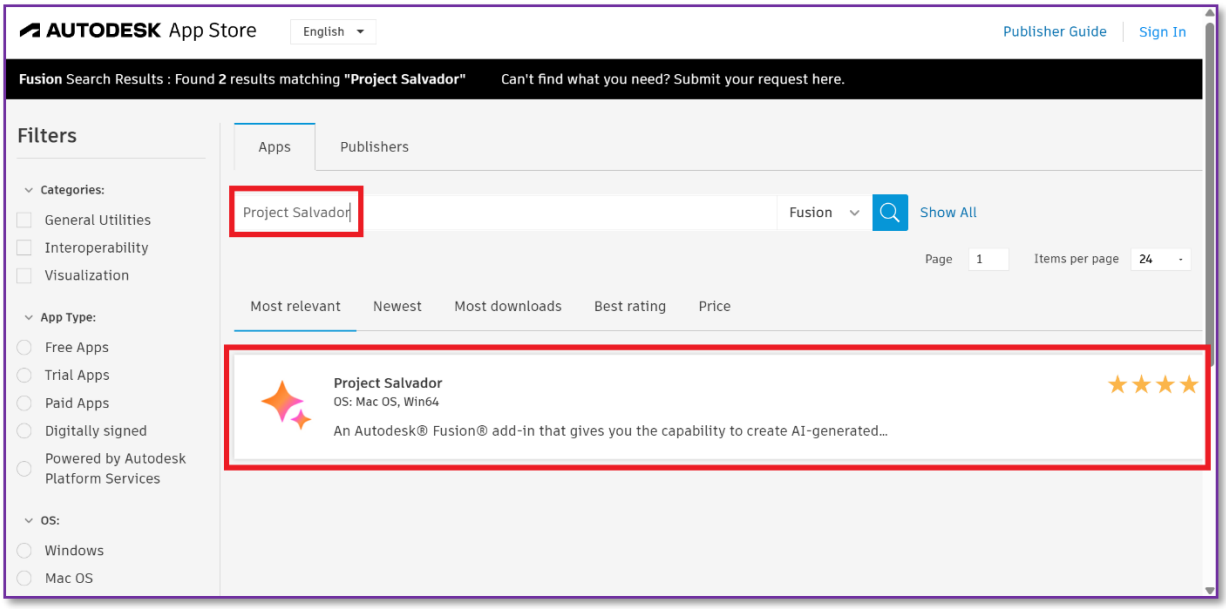


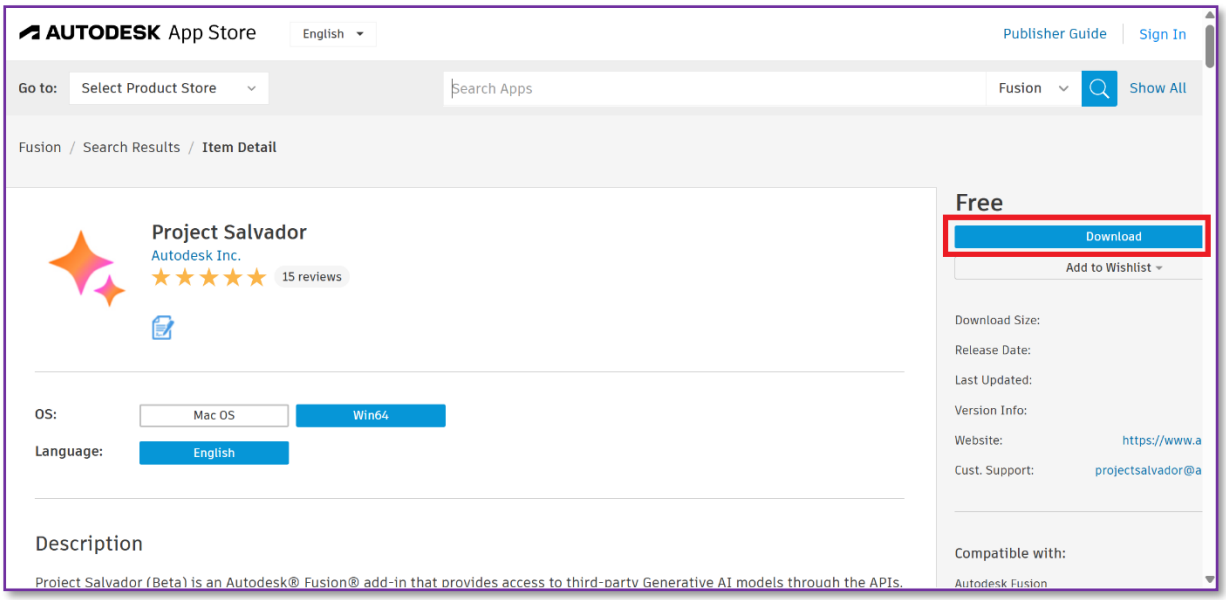

## PROJECT SALVADOR

1. Go to **"UTILITIES → ADD-INS"** and choose **"Fusion App Store"** from the dropdown menu.

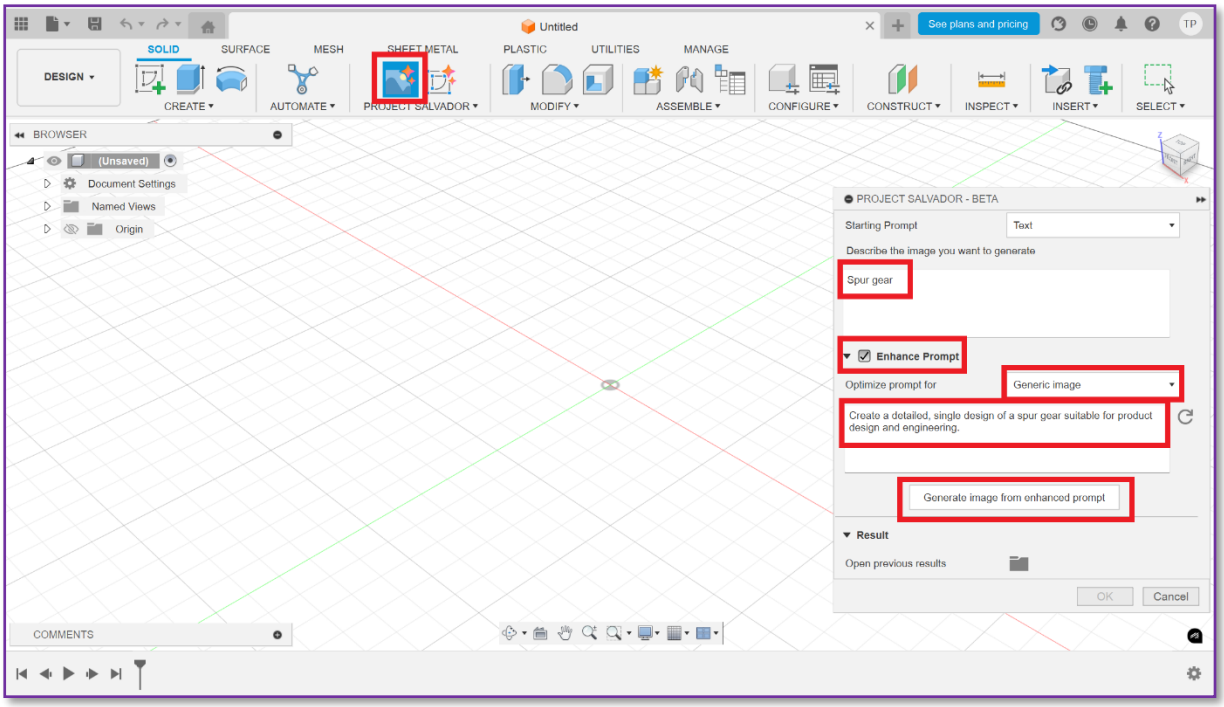



2. The app will redirect you to the **"AUTODESK App Store"**. Search for the add-in **"Project Salvador"**, click on it, and download the **ProjectSalvador_win64.msi** file. Install the file, then close and relaunch Autodesk Fusion for the add-in to take effect.

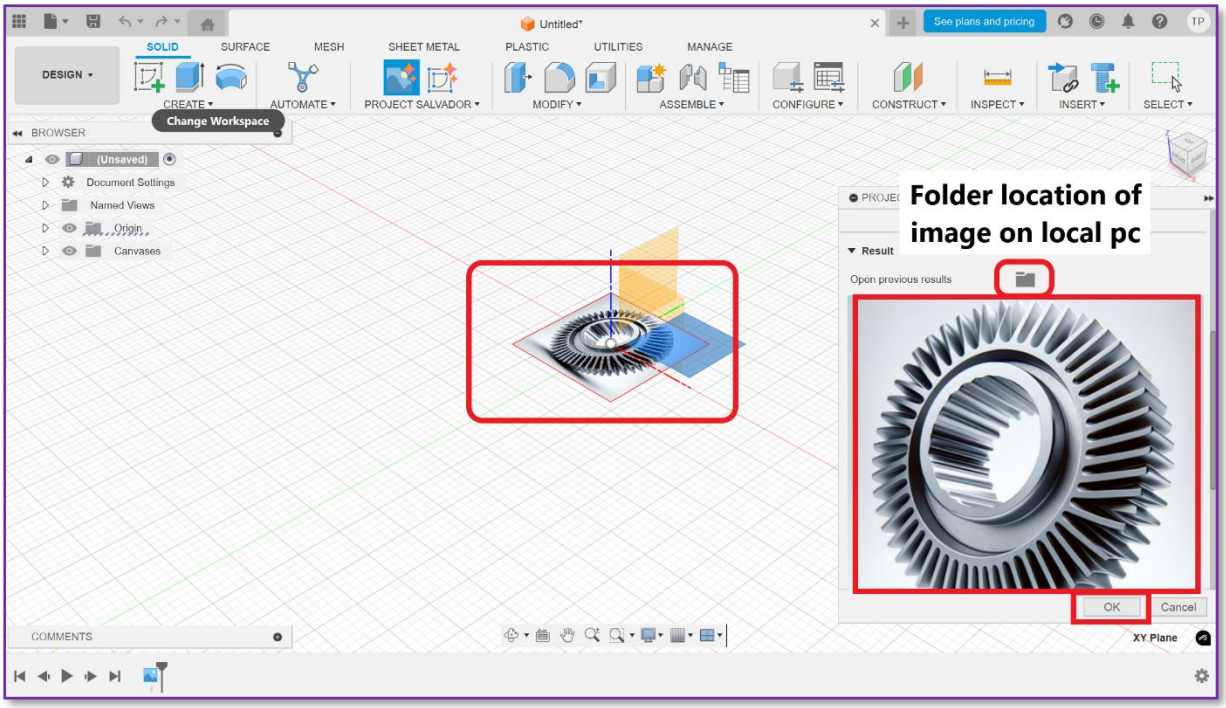


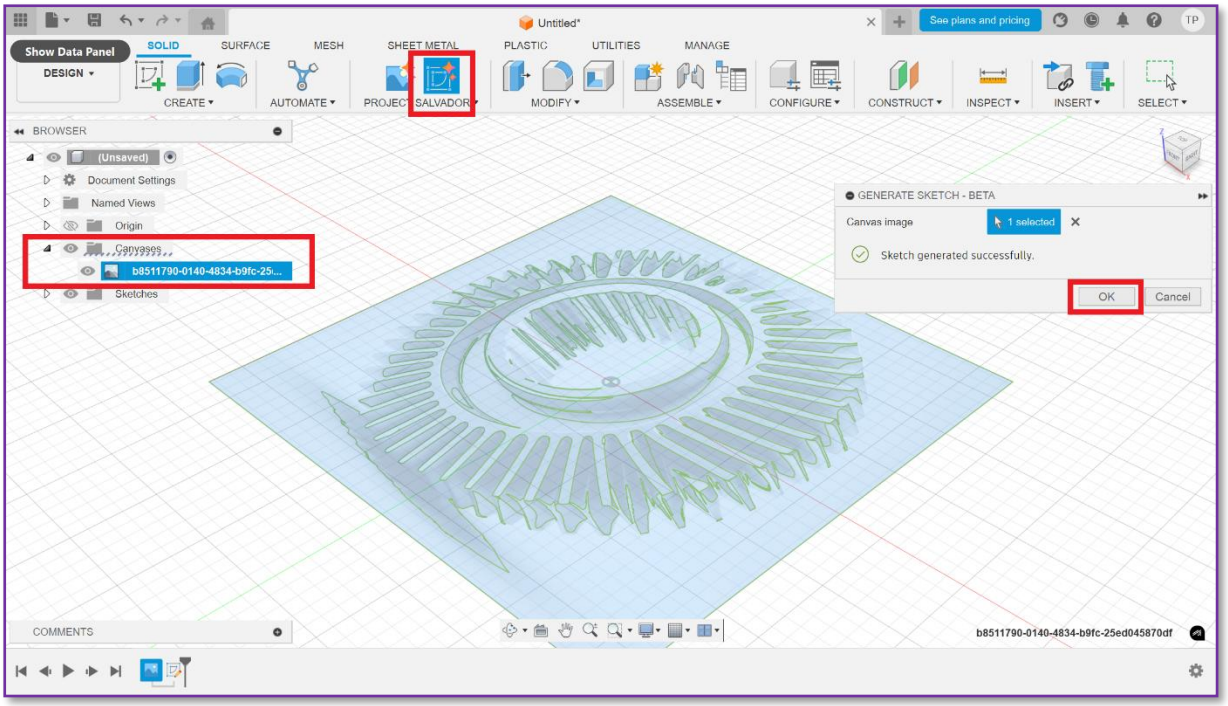

3. Click on **"Project Salvador - Beta"** and enter the prompt to create an image. Enable **"Enhance Prompt"** to auto-generate fine details for your creation. Click on **"Generate image from enhance prompt"** to create a 3D image based on the prompt.



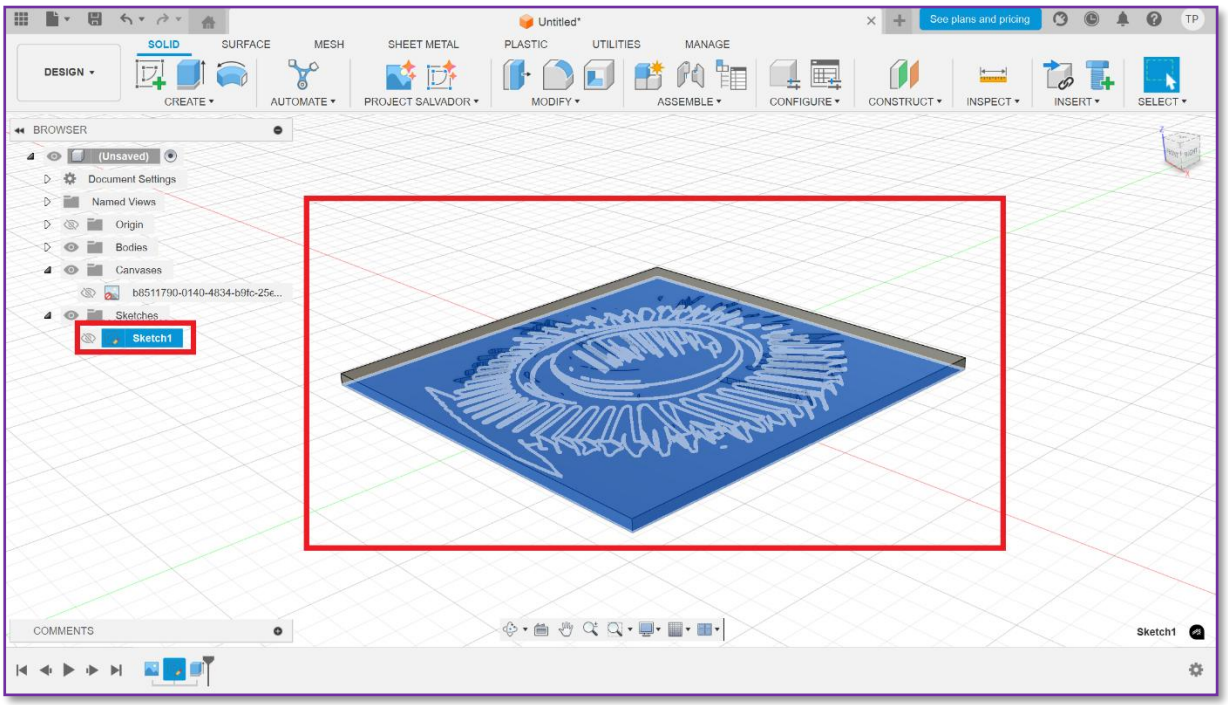

4. A 3D image of a spur gear will be generated. Pick a plane to paste the 3D image, adjust its position if needed, and click **"OK"** once the image is placed into the application.



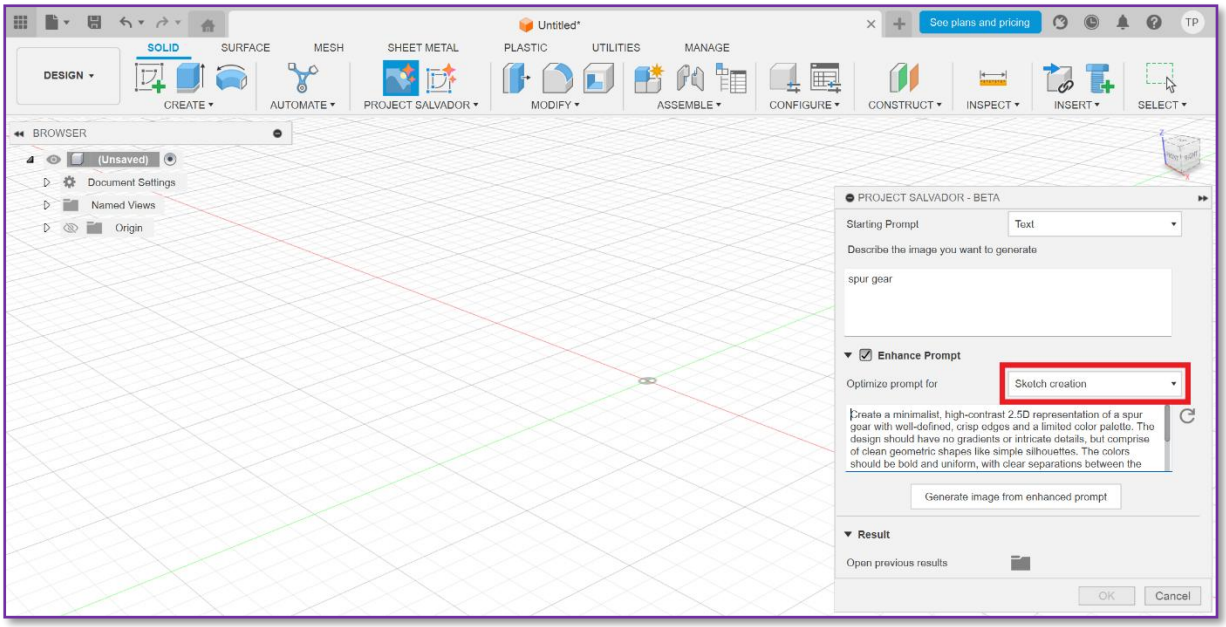

5. Click on **"Generate Sketch - Beta"** and select the image under canvases to generate a sketch based on the 3D image. Click "**OK**" to finish the sketch.




6. Now, we can use the sketch to create various solid bodies.




7. Alternatively, we can choose "**Sketch creation"** instead of Generic image to create **2D images**, which are better suited for creating sketches. This will provide better results compared to the first option.


Untitled*
See plans and pricing
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SHEET METAL
PLASTIC
UTILITIES
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PROJECT SALVADOR
MODIFY
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CONFIGURE
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INSPECT
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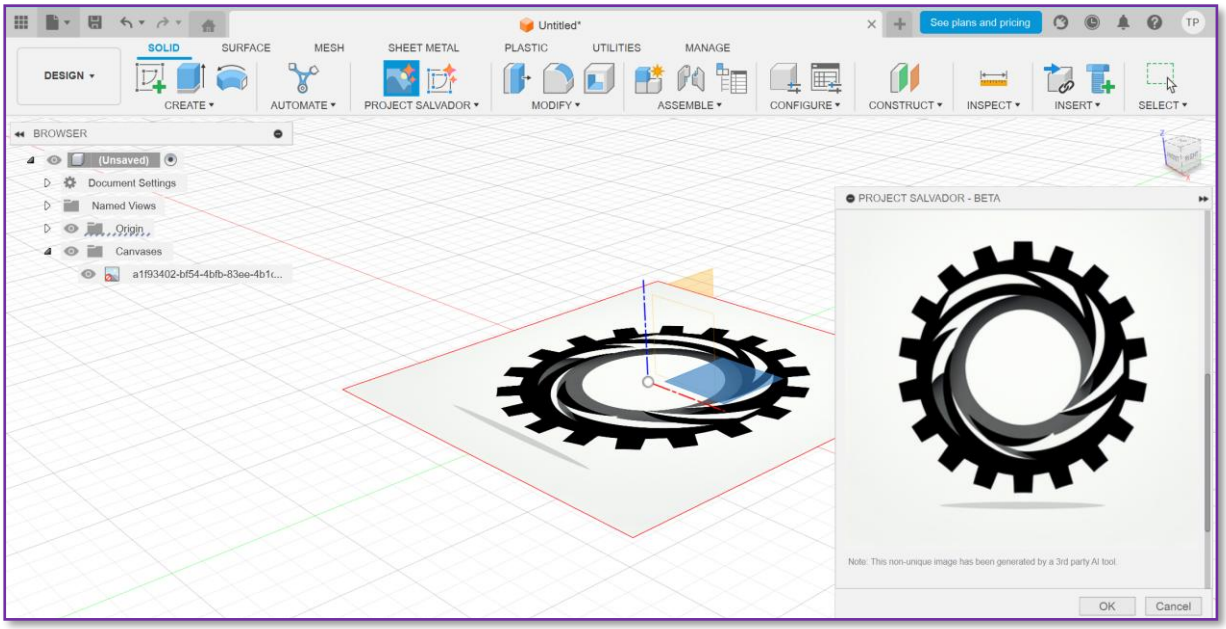
BROWSER
(Unsaved)
Document Settings
Named Views
Origin
PROJECT SALVADOR - BETA
Starting Prompt
Text
Describe the image you want to generate
spur gear
Enhance Prompt
Optimize prompt for
Sketch creation
Create a minimalist, high-contrast 2.5D representation of a spur gear with well-defined, crisp edges and a limited color palette. The design should have no gradients or intricate details, but comprise of clean geometric shapes like simple silhouettes. The colors should be bold and uniform, with clear separations between the
Generate image from enhanced prompt
Result
Open previous results
OK
Cancel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See plans and pricing
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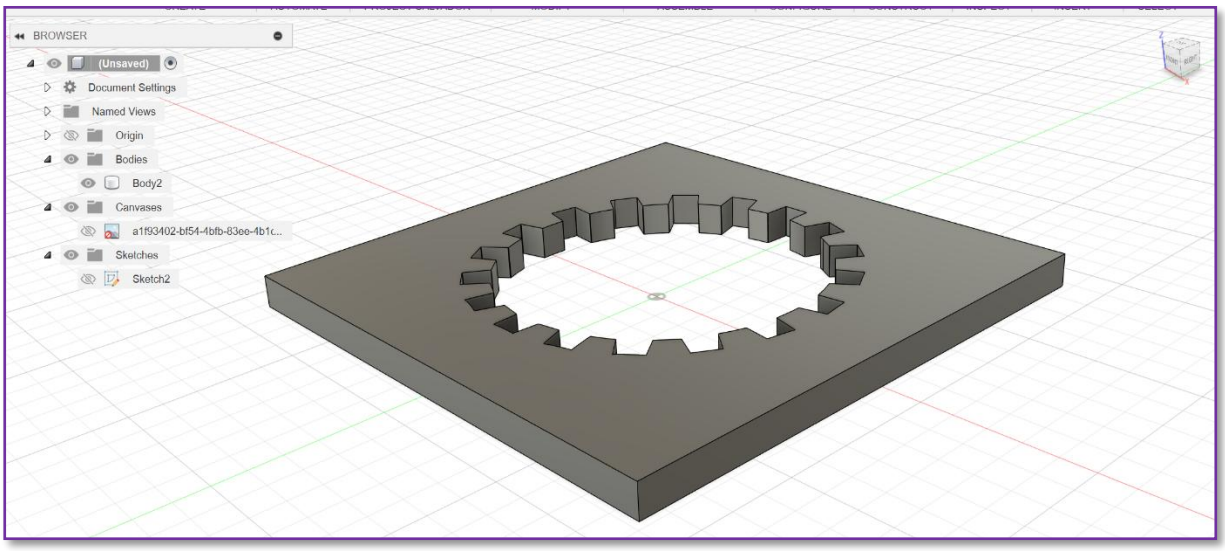
PROJECT SALVADOR - BETA
Note: This non-unique image has been generated by a 3rd party AI tool.
OK
Cancel


BROWSER
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Canvases
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Sketches
Sketch2

# Autodesk Student account activation

Go to "**https://www.autodesk.com/education/edu-software/overview**" and select the required application. Choose the **"Student"** subscription plan, fill in the required details as prompted, and activate your student account.